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Slaves to Technology: Worker control in the surveillance economy

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Abstract

Technology is enabling new forms of coercion and control over workers. While digital platforms for labour markets have been seen as benign or neutral technology, in reality they may enable new forms of worker exploitation. Workers in precarious conditions who seek employment via digital platforms are highly vulnerable to coercion and control via forms of algorithmic manipulation. This manipulation is enabled by information asymmetries, lack of labour protection, and predatory business models. When put together, these deficits create a perfect storm for labour exploitation. This article describes how digital platforms alter traditional labour relations, summarises case data from several existing studies, and details emerging forms of worker control and barriers to worker agency. It explores current definitions of forced labour and whether digital spaces require us to consider a new conceptualisation of what constitutes force, fraud, and coercion. It concludes with a summary of possible responses to these new forms of abuse in the global economy, including alternative models for business and for worker organising.

Keywords: gig economy, surveillance capitalism, platform work, precarious work, forced labour, labour markets

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Introduction

Workers living through what is variously called digital economy, surveillance capitalism,¹ or the 'fourth industrial revolution' face new forms of coercion and control. Jobseekers, particularly those who are already precarious and cannot rely on social capital, are looking online and turning to digital platforms.

¹ S Zuboff, *The Age of Surveillance Capitalism: The fight for a human future at the new frontier of power*, Profile Books, New York, 2019.

Platforms—web-based intermediaries which offer to link workers with jobs—are a key site for new forms of rights abuse and exploitation.

The promise of technology for development has inspired several well-intended digital interventions targeting precarious workers, such as Kormo in Bangladesh² or Lynk in Kenya,³ which are designed to match informal sector clients with self-employed workers. However, the designers of these interventions may not fully understand their human rights implications. Moreover, ‘future of work’ discussions on the role of technology in labour markets have largely centred on formal labour markets in developed economies, without understanding the extent to which digital intermediaries have been entering labour relations in developing countries and altering informal work.

This article focuses on the ways in which surveillance capitalism, i.e. the expansive access to and trade in individual data as a basic raw resource driving global markets and economic life, expands the means for coercing and controlling labour. It draws upon evidence from two recent case studies on digital platforms for domestic work in India and South Africa and their effects on workers’ agency. It begins with a discussion of how traditional labour relations are altered in the digital space. Citing recent research on algorithmic management and control, it offers a detailed discussion of platform-mediated work and platforms’ roles as brokers, gatekeepers, supervisors, and as jobbers. It also looks at the implications of the platform model for worker agency, particularly for migrants and highly isolated workers. It concludes with recommendations for programme design and policy interventions to mitigate risks, while calling for an expansion of our understanding of the elements of forced labour in the digital economy.

Labour Relations in the Digital Economy

A small handful of platform companies now dominate the entire globe, and are transforming our economic life.⁴ A ‘platform company’, per Gray and Suri, is a corporate entity whose business model relies on a two-sided application

² S Khalasi, ‘How Kormo and Bangalink are Helping the Urban Youth of Bangladesh Connect to Jobs and Develop Their Careers’, *Future Startup*, 19 September 2019, retrieved 22 June 2020, <https://futurestartup.com/2019/09/26/how-kormo-and-bangalink-are-helping-the-urban-youth-of-bangladesh-connect-to-jobs-and-develop-their-career>.

³ No author, ‘Lynk, A Kenyan Startup Transforming the Informal Sector’, *Proparco*, n.d., <https://www.proparco.fr/en/actualites/grand-angle/lynk-kenyan-start-transforming-informal-sector>.

⁴ K F Lee, *AI Superpowers: China, Silicon Valley, and the new world order*, Houghton Mifflin Harcourt, Boston, 2018.

programming interface (API) and the internet to ‘source, schedule, manage, ship, and bill task-based, project-driven work’.⁵ Work is fragmented into digitally intermediated ‘gigs’ that in many ways resemble piece-work.

Some have hailed the rise of platform companies as an antidote to rising inequality and a harbinger of a ‘sharing economy’.⁶ As Evgeny Morozov points out, platform companies present themselves in the United States and Europe as facilitating options for a struggling middle class. They claim to provide a platform for unemployed or underemployed people to monetise their existing assets and call themselves entrepreneurs.⁷ In countries with well-developed formal labour markets, the fiction of being part of an emerging ‘tech’ economy has helped these workers mask the stigma associated with entering the informal economy as cleaners, drivers, or factotums. In the rest of the world, where such precarious employment has long been the norm, workers have no such illusions.

Informal workers generally face well-documented vulnerabilities, such as lack of regular income or social protection. In addition, platform work may enable new forms of control over workers through the extraction and commodification of individual workers’ data. It is important to understand how not only labour but data are now being appropriated and commodified under what a growing number of digital rights advocates are calling data colonialism.⁸ This has profound implications for workers’ agency and rights. As Couldry and Mejias describe, ‘whereas historical colonialism appropriated land, resources, and bodies, today’s new colonialism appropriates human life through extracting value from data.’

Data Labour’ and Lack of Consent

Producing data is a form of labour that has been broken into such minuscule pieces that anytime a reader ‘likes’ a social media post, or geo-tags an image as part of a ‘captcha’ or challenge-response test, they have created something of value in the digital economy.⁹ There is no meaningful consent between the provider and the corporate beneficiary of what has been termed ‘data

⁵ M L Gray and S Suri, *Ghost Work: How to stop Silicon Valley from building a new global underclass*, Houghton Mifflin Harcourt, Boston, 2019.

⁶ E Morozov, public lecture at Impakt Festival 2018, available at <https://youtu.be/nkReZuU5mxc>.

⁷ *Ibid.*

⁸ N Couldry and U A Mejias, *The Costs of Connection: How data is colonizing human life and appropriating it for capitalism*, Stanford University Press, Stanford, 2019.

⁹ J Lanier, *Who Owns the Future?*, Simon & Schuster, New York, 2014.

labour.’ This and other forms of data extraction have major implications for the continued and potentially exacerbated commodification of labour. One is that it is acceptable for companies to profit from unwittingly provided data labour, which they may use to train algorithms or sell to data aggregators who know how to monetise it further. The result is the commodification of a much greater range of human activity beyond consensual work.

Worker rights advocates have yet to develop a response to the challenge of data extraction, where workers are compelled to provide data labour without their informed consent. Companies bank billions on the trade in personal user data,¹⁰ and harvest worker data as inputs for algorithms that determine how to further optimise their operations. For example, ride-hailing apps use driver and rider data to create increasingly sophisticated models and projections of human mobility and to inform the development of self-driving vehicles.¹¹ On the surface we may see this as benign, and hope this research contributes to better mobility for more people. However, gig workers are generally compelled to sign exceedingly broad agreements for access to their personal data as a condition of employment. Drivers have no meaningful way to opt out of providing this data to the company, nor are they in any way compensated for this data labour.

Ride-hailing apps have also been exposed as having harvested other data (not covered under these agreements) from drivers’ phones without their knowledge or permission. For example, Uber was found to have surveilled its drivers’ phone calls to learn if they were also driving for the competitor company Lyft.¹² This information was then used to manipulate drivers into dependency on Uber both through incentives (offering marginally better rates) and coercion (risk of being denied opportunities). In addition to using algorithms to push workers to accept sub-standard conditions and further externalise costs, there are reasons to be concerned about other ways in which worker data may be harvested, sold, and used by others. There is ample evidence of how algorithms may be used to engage in behavioural manipulation, including manipulating people’s opinions, and luring people into extreme or illicit behaviour.¹³

¹⁰ See, for example: European Commission, ‘Fair Taxation of the Digital Economy’, n.d., https://ec.europa.eu/taxation_customs/business/company-tax/fair-taxation-digital-economy_en.

¹¹ Lee.

¹² M Isaac, *Super Pumped: The battle for Uber*, W. W. Norton & Company, New York, 2019

¹³ Center for Humane Technology, ‘Your Undivided Attention Podcast, Episode 4: Down the Rabbit Hole by Design’, 10 July 2019, transcript available at https://assets.website-files.com/5f0e1294f002b1bb26e1f304/5f0e1294f002b144fee1f411_CHT-Undivided-Attention-Podcast-Ep.4-Down-the-Rabbit-Hole.pdf.

In recent years, digital rights advocates have begun to push back on the lack of consent involved in data extraction and data labour, resulting in occasional policy reforms such as the European Union's General Data Protection Regulation. With this legislation, rights advocates in Europe have succeeded in calling attention to right to privacy issues or the 'right to be forgotten.'¹⁴ However this approach fails to challenge the corporate right to commodify and benefit from individuals' data labour. As data is fundamental to the platform business model, human rights advocates should consider the ethical implications of the continuous extraction of this resource from a population that serves both as consumers and labour.

Digital Labour Arbitrage

Another way in which platform companies disrupt labour relations is through digital labour arbitrage. Alarcon and Gray describe how platform companies tacitly structure and may even expand precarity in labour markets by mediating tasks that might previously have constituted formal jobs.¹⁵ Digital platforms subdivide work into ever smaller bits or 'micro-tasks.' For example, Amazon's Mechanical Turk platform outsources tasks that may take performers only a few seconds to perform, such as tagging images, and for payment that may be only a fraction of the smallest denomination of a country's currency. Platforms are then able to engage in micro-negotiations over these bits, called 'gigs,' to further externalise costs surrounding each task onto workers. This alters labour relations by breaking down wage labour into ever smaller fragments and exerting new forms of control over each fragment of work. This has given rise to new use of the term 'gig worker' to mean one who derives income from participation in digitally-mediated tasks and micro-tasks.

Gray and Suri point out that this kind of digital mediation builds on longstanding practices of labour arbitrage, or the infamous 'race to the bottom', wherein jobs are shifted toward geographies with the lowest wages and weakest labour protection.¹⁶ What is qualitatively different is that technology accelerates the pace of this competition to an inhuman level. For example, they describe workers on Amazon's Mechanical Turk who must monitor their accounts constantly, as desirable 'gigs' may disappear minutes or even seconds after they are posted. Gig workers based in high-wage economies are in constant competition with

¹⁴ B Wolford, 'Everything You Need to Know About the Right to Be Forgotten', FAQ on GDPR.EU available at <https://gdpr.eu/right-to-be-forgotten>.

¹⁵ A Alarcon and M L Gray, *Future of Work Global Labor: Literature review*, USAID, Washington, D.C., September 2019, https://pdf.usaid.gov/pdf_docs/PA00W54D.pdf, p. 1.

¹⁶ Gray and Suri.

workers from low-wage economies competing for the same tasks. Workers must also patch together a multitude of ‘micro-tasks’ in order to reach an adequate level of employment. The search costs to find each micro-task are externalised onto workers. Prices for tasks are fixed and non-negotiable. This is another way in which labour relations have been fundamentally altered.

Algorithmic Cruelty

A third important alteration to labour relations is the disappearance of the human relationship between employer and worker, as platforms impose algorithmic intermediaries between requesters and providers to establish compensation and terms and conditions of work. Gray and Suri refer to this as ‘inadvertent algorithmic cruelty’, since it removes the possibility of empathy between service provider and client. Algorithms are based on codes that necessarily rely on binary choices. These do not allow for consideration or understanding of human exigencies, such as the need to care for a sick family member or an unforeseen road blockage. Platforms may not have humans available to respond to workers who cannot meet the exact terms of a gig for some reason, and may therefore impose harsh penalties on the worker for non-performance. Yet the choice to allow a code to determine a reward or penalty is ultimately intentional. The implications of the removal of a human interlocutor for worker agency are discussed with respect to the cases detailed below. As researchers noted in one of the reports discussed:

(Platforms are) reflecting and reproducing existing structures of exploitation. Yet, it is also important to recognize the differences that arise from the digital and algorithmic intermediation of domestic work. Domestic work involves not only physical work but also affective labor—it involves relationship building, trust, and negotiation... Much of this is rendered impossible with work mediated through digital platforms.¹⁷

Worker Agency in Platform Labour

In most of the world, economic activity in the informal sector dwarfs that in the formal sector. Nearly half of all workers in developing countries are self-employed

¹⁷ Z Mawii and U Aneja, *Gig Work on Digital Platforms. Case Study 3: SweepSouth – Platform-Based Domestic Work*, USAID, March 2020, https://pdf.usaid.gov/pdf_docs/PA00WHJ9.pdf, p. 15.

and/or engaged in small-scale farming.¹⁸ Many more are underemployed and in insecure or precarious work, and the International Labour Organization (ILO) suggests that the trend in all countries is away from stable and long-term employment and toward non-standard work.¹⁹ In other words, many workers around the world are already ‘gig workers’, although they traditionally rely on social capital and word-of-mouth to obtain jobs. Furthermore, amid the recent economic shock caused by COVID-19 and the ILO prediction that up to 300 million jobs may be lost,²⁰ coupled with the dramatic rise in demand for contact-free services, it is now certain that the post-COVID recovery period will likely see an irreversible worldwide shift toward platform-enabled non-standard work.

In recent years, development practitioners have been lured by the promise of technology as a fix for information asymmetries inherent in labour markets. As a consequence, they have heavily invested in platforms intended to enhance transparency of information in labour markets. Platforms targeting low-wage jobseekers like Kormo (Bangladesh), Lynk (Kenya), and Bong Pheak (Cambodia) have proliferated; indeed, Bong Pheak was launched with a grant from the US Agency for International Development (USAID) in order to provide better information to jobseekers who might otherwise be vulnerable to trafficking and exploitation.²¹

To be sure, the problem of imperfect labour markets is an important developmental challenge. There is a clear need for interventions to address the information asymmetries that make it easy to exploit workers. Since the early 1990s, my work as an anthropologist and development practitioner has examined the flow of low-skilled young women from rural to urban areas in search of jobs. These workers have entered factories, restaurants, domestic work, and, in some cases, sex work. In all scenarios they have suffered from information deficits: most have relied entirely on word-of-mouth assurances regarding the terms and conditions of their work, and faced a very high risk of exploitation as a result of their inability to know, let alone control, their ultimate work situations. Many have felt compelled to work through brokers and entered some form of debt bondage to these middlemen. The brokers, by controlling information, have also controlled workers.

¹⁸ World Bank, *World Development Report 2013: Jobs*, World Bank, Washington, D.C., 15 October 2012.

¹⁹ R Torres *et al.*, *World Employment Social Outlook: The changing nature of jobs*, ILO, Geneva, 19 May 2015.

²⁰ International Labour Organization, *ILO Monitor: Covid-19 and the world of work. Third edition*, ILO, Geneva, 29 April 2020.

²¹ P Ford, ‘Bong Pheak – Combating human trafficking through an employment information website’, *Geeks in Cambodia*, 29 August 2018, retrieved 24 April 2020, <http://geeksinCambodia.com/bong-pheak-website>.

Well-meaning advocates have sought to mitigate these issues by providing ‘awareness-raising’ training regarding risks to prospective migrants. Their hope is that with better information migrants can make better choices regarding employment placements. This has included promoting online labour brokers such as Cambodia’s Bong Pheak. Unfortunately, the replacement of informal networks of labour brokers with online labour brokers may be an emblematic example of how power asymmetries cannot be fixed by technology.

By the early 2000s, the use of information and communications technology for development was hailed as having great promise to crack complex challenges. Even rural communities seemed to be connecting online. Donors and advocates seeking to disrupt human trafficking networks were keen to use platforms to supplant informal and often unscrupulous middlemen for prospective rural-urban and cross-border migrants. USAID and other donors invested in platforms designed to provide more and better information to jobseekers.

Concerned with the possibility that outcomes for workers might not all be positive, USAID commissioned an evidence review and a series of case studies in 2019 to examine the experience of low-wage and vulnerable workers on platforms. It focused on the extent to which platforms corrected for labour market information asymmetries, how they affected basic labour protections and rights at work, and what consequences they had for worker agency. The case studies were carried out by the India-based firm Tandem Research. The Overseas Development Institute (ODI) simultaneously undertook a similar study.²²

The following section details findings regarding control and agency confirmed by two of these case studies, on platforms targeting domestic work in South Africa (SweepSouth) and India (QuikrJobs, previously Babajob). These findings are supplemented by my own interviews under a fellowship with Open Society Foundations. I conducted life history interviews with approximately two dozen individuals working for ride-hailing and domestic service platforms in South Africa, the United States, United Kingdom, and India, and shorter interviews with driver representatives from Indonesia, Australia and Cambodia. I obtained additional material from the Brazil-based human rights organisation Reporter Brasil regarding their interviews with delivery, ride-hailing, and domestic service platform workers, and material from interviews with labour union representatives and labour policy experts in India, South Africa, and

²² A Hunt *et al.*, *Women in the Gig Economy: Paid work, care and flexibility in Kenya and South Africa*, Overseas Development Institute, London, November 2019, <https://www.odi.org/publications/11497-women-gig-economy-paid-work-care-and-flexibility-kenya-and-south-africa>.

the United States. All interviewees cited in this article have provided consent to share their names and the content of the interviews.

Platforms as Brokers: Information asymmetry by design

Platforms act as gatekeepers between prospective employers and prospective workers. Thus, in principle, they are positioned to address information deficits among both employers and workers. This is the principle behind both the SweepSouth and QuikrJobs platforms. However, the cases suggest that the platforms may exacerbate rather than alleviate information asymmetries.

The two platforms represent two different types of intermediaries. SweepSouth is a *gatekeeper*. It functions as an active intermediary by assigning workers to specific jobs, determining remuneration, controlling other terms and conditions of work, and retaining the right to disallow or ‘deactivate’ users from the platform. QuikrJobs’ operating model is different: it is a job *aggregator*. All interactions between jobseekers and employers, including negotiations over remuneration and other terms and conditions of work, take place outside the platform.

In principle, both models increase workers’ access to information about prospective jobs and clients and decrease bias in labour markets through seemingly neutral placement criteria. Yet, it may be impossible to have truly neutral gatekeepers as algorithms may reinforce existing power dynamics. In South Africa, for example, where household employment relationships are rooted in apartheid-era race relations, both the Tandem interviews and my own suggested a high share of recent migrants, particularly from Zimbabwe, are entering the domestic work sector. Migrants are more likely to favour use of online platforms than native South Africans since they do not have access to the other forms of social capital that local workers use to obtain jobs. In addition, migrants generally face discrimination in the South African job market, which creates barriers to job placement through traditional channels. Even skilled migrants reported both to the Tandem team and to me that they were unable to access jobs at their skill and qualification levels and were subject to employment discrimination. Platforms allowed them to bypass these discriminatory barriers they faced in seeking employment.

However, Tandem found that design features of SweepSouth intentionally reinforced information asymmetries. While employers were provided with full biographical details and ratings of the prospective workers, workers were not shown any details of the clients they were matched with. Thus, employers were in a position to apply bias to their choices while workers had neither information nor choice. Further complicating matters, workers were also penalised for not accepting jobs. This type of information asymmetry was also present in ride-hailing platforms. Drivers in my interviews confirmed that they could not make

informed choices about which rides to accept. The algorithms were designed to prompt drivers to accept rides without providing any information about fares or destinations.²³ Only after the client was in the vehicle would the platform provide the driver with information about the destination. Even then, some drivers were not provided with information regarding the fare until after the ride was complete.

Because QuikrJobs is a job aggregator, it is in principle well-positioned to correct for information asymmetries. As the Tandem case study notes, jobseekers on the platform commonly lack data on what appropriate salaries or terms and conditions of work are, and this limits their ability to bargain. This information asymmetry is 'heightened by the fact that jobseekers may be looking for jobs in locations different from where they previously lived or worked and could possibly be applying to different job roles.'²⁴ Job aggregator platforms could potentially improve workers' agency by providing more fulsome information about and choice among prospective employers, wages, and terms and conditions of work, and by reducing barriers to entry to labour markets. However, these features require active design choices. The study noted,

QuikrJobs management did mention that they create a report on salary and hiring trends, demand for job roles, and market conditions. However, this is not released publicly. Having such data could help jobseekers negotiate better employment terms and conditions and avoid being exploited. It is worth noting that BabaJob used to have a feature that allowed jobseekers to see the average salary range for the particular job in that locality. This feature is not present on QuikrJobs.²⁵

The study also found that jobseekers have no way of reviewing employers or reporting fraudulent job postings. QuikrJobs reported that jobseekers can and do make complaints via the platform's social media channels. However, this was insufficient to hold fraudulent posters or unfair employers accountable. Indeed, jobseekers' comments suggested that the platform may be enabling fraudulent recruitment. The report states,

Some workers did note that they had come across fraudulent postings on the platform and some had even paid money when contacted by these fraudulent posters. QuikrJobs has processes in place to screen and remove fraudulent postings, but some

²³ Interviews, Cape Town and Johannesburg, July 2019; San Francisco, September 2019.

²⁴ Mawii and Aneja, *Case Study I: QuikrJobs – India*, p. 10.

²⁵ *Ibid.*, p. 11.

still remain... With most fraudulent postings, the aim is to convince workers to pay some money to the prospective recruiter.²⁶

This again highlights the importance of intent and design choices. In February 2019, I interviewed the staff managing the Bong Pheak platform. They indicated that they also lacked a sufficient guardrail to protect jobseekers against fraudulent postings—a particularly ironic design flaw given that Bong Pheak sought investment as an anti-trafficking intervention.

These two models suggest that platforms must choose between allowing workers to negotiate freely while exposing them to risk of fraud and deception (the QuikrJobs model), or providing more clarity around the terms of work while offering less autonomy and choice to workers. Yet alternatives are possible. In 2014, the organisation Centro de los Derechos del Migrante (CDM) in Maryland launched a platform called Contratados. It is intentionally designed to provide employer information to prospective workers, verify the *bona fides* of employers, and allow workers to post safe and anonymous reviews of employers. Aggregated data on patterns and practice are also used to inform advocacy on behalf of workers. There is some evidence that this approach has been successful in enhancing worker rights and worker agency.²⁷

Platforms as Supervisors: Rating systems as a means of coercion and control

Rating systems are commonly used by platforms of all kinds and represent another example of how platforms can undermine workers' agency. A simple one-to-five-star rating system is a common way for clients or users of a platform to rate anything from a product they have purchased online to a service such as an Uber ride or AirBnB stay. The system is ostensibly couched as 'crowdsourcing', enabling the product or service to continuously improve as a result of customer feedback. In reality, it is often used as a control mechanism, instilling gig workers with fear of 'deactivation' from the platform that may coerce them into accepting unsafe or exploitative conditions of work.

Deactivation is a term used to describe the suspension of an account used by a worker to access gigs; it is effectively an electronic blacklist. Workers are penalised for receiving low ratings, and may be deactivated from the platform

²⁶ *Ibid.*, p. 8.

²⁷ L. Rende Taylor and E. Shih, 'Worker Feedback Technologies and Combatting Modern Slavery in Global Supply Chains: Examining the effectiveness of remediation-oriented and due-diligence-oriented technologies in identifying and addressing forced labour and human trafficking', *Journal of the British Academy*, vol. 7, no. s1, 2019, pp. 131-165, <https://doi.org/10.5871/jba/007s1.131>.

on the basis of client complaints or low ratings. This invisible and impersonal form of control is critical to consider in the context of human trafficking as it may represent a form of force or coercion where the agent of coercion is an algorithm. This raises serious challenges regarding accountability.

This system of rewards and punishments acts coercively to prevent workers from speaking out when laws are violated. A domestic worker interviewed in the Brazilian documentary *A Uberização do Trabalho* described how the platform Rappi would determine how many hours a gig would take based on the work described by the client. However, she would often find additional cleaning tasks at the assigned location, and fearful that she would receive a poor rating if she did not complete them, would put in the extra time and work for no additional payment.²⁸ Researchers who have documented app-based domestic work in the US and Europe share similar stories.²⁹ Similarly, drivers I interviewed stated that they feared negative ratings from clients as it could trigger deactivation. Thus, they felt compelled to undertake assignments of dubious legality, such as transporting minors. One driver in California explained how she rejected a ride when she realised she would be picking up two minors (illegal in California), reported the incident to the platform, only to witness the same individuals being picked up immediately afterward by another driver for the same platform. She was deactivated after filing the report.³⁰

In this system, clients become unwitting instruments of control. In the case of SweepSouth, workers reported that they are encouraged to maintain a rating of 4.75 (out of a possible 5). Low ratings prompt warnings from the platform and three consecutive ratings of below two stars results in worker accounts being deactivated. Workers have little to no ability to contest or negotiate these ratings.³¹

The Tandem team found that clients may not understand the rating system, and their ratings may be based on a whim, or deeply ingrained racial and class stereotypes. They observe that:

²⁸ C J Barros, C Angeli, and M Monteiro Filho (Dirs.), *GIG – A Uberização do Trabalho* [*The Uberization of Work*], documentary film by Reporter Brasil, 2019, <https://reporterbrasil.org.br/gig>.

²⁹ A Mateescu and A Nguyen, *Explainer: Algorithmic management in the workplace*, Data & Society, 6 February 2019, https://datasociety.net/wp-content/uploads/2019/02/DS_Algorithmic_Management_Explainer.pdf.

³⁰ Interview, September 2019.

³¹ Mawii and Aneja, *Case Study 3*, p. 10.

The one-sided nature of the ratings systems creates a structural domination of the platform over workers which is dependent on worker fungibility. Although workers can also leave ratings for clients, the workers we spoke to did not seem to feel that this was of much consequence [...]. Workers do not have the option of picking their clients or declining those with low ratings. Nor do they have the option to freely cancel appointments—SweepSouth deactivates their account if they cancel more than four appointments in a month. Workers are also unlikely to cancel bookings because of the loss of earning potential. Autonomy is thus constrained both because of platform design and broader labor market conditions.³²

This finding is common across studies of labour market platforms. Consumer-sourced rating systems place additional pressures on workers to comply with clients' demands, as poor ratings factor into algorithmic decisions on gig assignments. The fear of deactivation acts to coerce workers to accept undesirable gigs and hours. It can leave workers with little choice but to forego workplace safety interests, such as declining to report sexual harassment out of fear of receiving a poor rating from a client.³³

In their study on Uber drivers in India, Raval and Dourish found that drivers felt companies were using ratings in ways that clients themselves might not intend; nor did they perceive that clients understood the implications of the rating system. They cite the following driver interview:

As a driver mentioned, 'Most passengers don't understand Uber rating system. They are led to believe Yelp style rating. With Uber anything less than 5 stars is a failure.' As has been widely reported from the data released by Uber, 4.6 is the lower limit below which drivers are given a warning and a stipulated time period to improve their ratings, failing which they get deactivated. ... While Uber's report mentions the top five complaints associated with low ratings, it does not comment on whether passengers are aware that within their rating system, unlike other known reputation systems, the rating threshold is much higher.³⁴

³² *Ibid.*

³³ Mateescu and Nguyen, p. 8.

³⁴ N Raval and P Dorish, 'Standing Out from the Crowd: Emotional labor, body labor, and temporal labor in ridesharing', *CSCW '16: Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*, 2016, pp. 97-107, <https://doi.org/10.1145/2818048.2820026>.

Gig workers I interviewed in South Africa were extremely concerned with deactivation, and virtually all of the ride-hailing app drivers who participated in my interviews had been deactivated at least once.³⁵ A deactivated worker can no longer access any jobs through the platform. The workers described the action as one in which their apps simply ceased to function, with no notification or warning. These platform workers typically only interface with the app and not with a person, so they have limited recourse to protest the deactivation. Interviewed drivers presumed that a low customer rating was the reason for the deactivation, but they were unable to obtain their files from the company to verify this. Some drivers were successful in calling the company and having their accounts reinstated, but felt that this, too, was arbitrary. One driver reported having her account mysteriously reactivated two weeks after the deactivation.³⁶

Platforms as Disruptors: Undermining labour protection

In addition to the challenges described above, evidence of new forms of worker control has emerged around algorithmic management, the latest refinement of Taylor's famous 'time and motion' approach. Algorithmic management uses artificial intelligence (AI) for data collection and continuous surveillance of workers to further extract or 'optimise' labour in what amounts to an extreme form of labour arbitrage.³⁷ This data enables platforms to control ever more fragmented bits of a worker's time, agency, and labour and use behavioural 'nudges' to incentivise workers to work harder, faster, or provide labour at all hours. One example of this is Upwork, a company that matches freelancers to gigs, which has 'developed software—cheerfully called the "Private Workplace"—that provides minute-by-minute logs of contractors' computer keystrokes, tracks mouse movements, and secretly snaps periodic screenshots, so that the employers can ensure that their potential cyber slacker is on task.'³⁸

Algorithms acting as managers are not programmed to stop nudging for ever more efficient work. The algorithms are coded to continue optimising behaviour even when rates of work and rates of compensation are clearly in violation of local laws. If a worker is willing to accept a task at below minimum wage, or even to take on debt to be selected for a task, most platform algorithms will reward rather than prevent this from taking place. One egregious example of this is the US-based household cleaning app Handy, which openly uses a system

³⁵ Interviews with Uber drivers in Cape Town and Johannesburg, July 2019.

³⁶ Interview with Uber driver, Cape Town, July 2019.

³⁷ Mateescu and Nguyen.

³⁸ S Hill, *Raw Deal: How the 'Uber economy' and runaway capitalism are screwing American workers*, St. Martin's Press, London, 2015, p. 104.

of imposed fees on workers, leaving some in debt bondage.³⁹ The examples shared by Reporter Brasil of domestic workers on Rappi also emphasise this point. This is an intentional design choice. As Isaac and others have described, the business model of many platform companies is to disrupt existing labour markets precisely by disrupting employment laws.⁴⁰ The listing of gigs at well below local and national minimum wage rates is a known feature of many platforms.

The companies are able to openly flout labour laws because they have successfully argued that they are not employers but simply job aggregators. Pinto and Smith describe the challenge in the US context. As they state,

Handy, Uber, and several other gig companies have mounted a multijurisdictional policy campaign to rewrite the rules of worker classification to carve themselves out of labor standards and to codify misclassification. At the federal and state levels, they are pushing both legislative and administrative changes that designate all workers who find work via so-called ‘marketplace platforms’ as independent contractors who are not covered by labor and employment protections.⁴¹

The issue of disguised employment is salient in jurisdictions where labour protection is relatively strong. In countries where the informal sector dominates, however, the issue of regulation regarding self-employment is also salient. In Indonesia, drivers have been able to organise successfully because they were able to win protection under Indonesia’s laws covering self-employed workers who form cooperatives.⁴² In South Africa and India, however, interviewees who were previously self-employed as private car hire service providers, and were therefore already independent contractors, lost autonomy and status once they no longer had access to their own independent client base.⁴³

³⁹ N van Doorn, ‘Late for a Job in the Gig Economy? Handy will dock your pay’, *Quartz*, 3 October 2018, <https://qz.com/work/1411833/handy-charges-fees-to-its-workers-for-being-late-or-canceling-jobs>.

⁴⁰ Isaac.

⁴¹ M Pinto, R Smith, and I Tung, *Rights at Risk: Gig companies’ campaign to upend employment as we know it*, National Employment Law Project, 25 March 2019, <https://s27147.pcdn.co/wp-content/uploads/Rights-at-Risk-4-2-19.pdf>.

⁴² Interview, Indonesian drivers in London, January 2020.

⁴³ Interviews, Cape Town, South Africa, July 2019, and via telephone to Chennai, India, February 2020.

Platforms also further externalise costs onto precarious workers. Thus, even when platforms like SweepSouth guarantee workers a minimum wage, such platforms simultaneously exploit a business model that places responsibility for all search, transit, and other costs onto workers. There are significant hidden costs for SweepSouth workers. Those interviewed reported they spend around ZAR 50 on transport per booking, and upwards of ZAR 35 on data and airtime per week. These hidden costs often amount to as much as ZAR 350-400 (approx. USD 20) per week.⁴⁴ High transport costs also reflect the spatial segregation of Cape Town, with clients and workers typically living in different parts of the city. While platforms like SweepSouth are easily able to collect the data on each worker to adjust for such costs, not only do they generally avoid doing so, but they may even be using algorithms to experiment with workers and determine how far they are willing to go to obtain a gig. Virtually every Uber driver I interviewed, in every city, reported that typically the first gig they would be offered when they logged on for a shift would be far from their starting point. Researchers have speculated that this is an intentional experiment to see how far drivers could be pushed to take on the costs they would incur to reach their first gig.⁴⁵

Correcting for Techno-optimism

Human rights advocates have now amply documented ways in which social media platforms have been directly responsible not only for disseminating but pushing content that inflamed sectarian tensions in several countries.⁴⁶ The firm Cambridge Analytica has purchased and sold data to political actors who have used it to exacerbate social tensions and manipulate voter behaviour in several countries.⁴⁷ As trade in data is not regulated, it is critical that we ask who else can purchase this data. Low-wage workers, and particularly those who are highly isolated such as migrant workers, have been identified as a population

⁴⁴ Per Hunt *et al.*, the Sectoral Determination of Minimum Wages for Domestic Workers (December 2018) stipulates that domestic workers in 'bigger metropolitan areas' working more than 27 hours per week are entitled to a minimum hourly wage of ZAR 13.69, while those working fewer than 27 hours are entitled to ZAR 16.03 per hour. For a 35-hour workweek, a domestic worker would earn approximately ZAR 479.

⁴⁵ Interview with Michelle Miller, Director of Coworker.org, 4 February 2020, Washington, D.C.

⁴⁶ S Kelly *et al.*, *Freedom in the World 2017: Manipulating Social Media to Undermine Democracy*, Freedom House, New York, November 2017, https://freedomhouse.org/sites/default/files/2020-02/FOTN_2017_Final_compressed.pdf; see also D Swislow, 'The Distributed Denial of Democracy', *Medium*, 9 November 2016, <https://medium.com/@dswis/the-distributed-denial-of-democracy-23ce8a3ad3d8>.

⁴⁷ Kelly *et al.*

that may be highly susceptible to online manipulation by violent extremists.⁴⁸ Are platforms designed to forestall such possibilities?

Development practitioners who were originally optimistic about the promise of technology now realise that they failed to see the consequences of enabling a business model premised on luring people into risky situations and extreme behaviours. Internet governance advocates have exposed a predatory business model whereby platform companies seek to monopolise markets, often knowingly breaking local laws.⁴⁹ Platform firms engage in predatory behaviour not because of the need to compete for consumers, but to compete for access to data, as their business model relies on their ability to hoard and monetise data.

The promise of technology to overcome labour market asymmetries has not been realised. Platform companies have been allowed to concentrate information and control over data. Information asymmetries may actually be exacerbated in the digital economy, as data extraction and algorithmic management enable new forms of control over workers.

As the Tandem team notes, platforms need not be inherently exploitative, but it is critical that measures to provide transparency and enable worker agency be built into their design. In its early stages and prior to its acquisition, QuikrJobs' predecessor, Babajob, was intended to improve opportunities for informal workers. This meant that certain design features were built into the platform to provide prospective workers with information about prevailing wages and conditions of work, which enabled them to negotiate with employers. In addition, as Babajob's funder USAID enforces an 'open data' policy, the company was unable to monopolise or monetise data extracted from its users. QuikrJobs continues to collect market and personal data, but no longer makes this information available to workers.

Can we build a better mousetrap? One example of a platform intentionally designed to support worker agency and rights, Contratados, was noted above. A number of 'ethical' alternatives to platforms for domestic work, ride-hailing, and the like have been launched recently, such as Well-Paid Maids (cleaning), Bzzt (transportation), and Fairbnb (short term rentals). These companies have embraced formal employment relationships with their workers, and, as Riggs and Batstone noted, have rejected the data-extractive business model of their peers. Instead, these companies 'use the value generated from their technologies not to expand the workforce to a vast peer-to-peer network, but to make drivers and

⁴⁸ Institute for Policy Analysis of Conflict (IPAC), *The Radicalisation of Indonesian Women Workers in Hong Kong*, IPAC, 26 July 2017, http://file.understandingconflict.org/file/2017/07/IPAC_Report_39.pdf.

⁴⁹ Isaac.

mechanics more efficient and to educate, train and retain them as employees.⁵⁰ A movement to organise platform workers into cooperatives, incubated at the New School in New York, is also providing a vitally useful alternative to the data-extractive business model described.⁵¹ While such models provide helpful alternatives to workers, it will be difficult for any of them to reach scale in a market where the imperative is toward data monopolisation.

A new set of organisations that are focused on organising gig workers, such as Gig Workers Rising (US) and Worker Info Exchange (UK), are beginning to explore issues of data privacy and data sovereignty. But they have yet to reach consensus on an alternative, worker-centred data ownership model. Some have pushed for the need for governments and municipalities to gather data from platform companies and create public data trusts; others have argued for worker ownership of worker data.⁵²

Kellogg, Valentin and Christin document examples of ‘reverse surveillance’, or ‘sousveillance’, as another strategy that supports collective action. This tactic requires pre-existing networks of workers capable of recording and uploading information about what is occurring in their work to make managers accountable via documentary evidence that, when shared, exposes patterns of misconduct. As they note, employers have already pushed back against such tactics, for example by forbidding employees from utilising personal smartphones in workplaces.⁵³

We will need more research and a solid evidence base beyond the existing case studies to enable effective and worker-centred alternatives. Further studies should create evidence that enables labour advocates to better understand how algorithms may be working to modify behaviour among such workers, and analyse the rights implications of behavioural nudges, coercive ratings systems, and unpaid data labour with respect to existing definitions of force, fraud, and coercion, and to labour arbitrage.

⁵⁰ W Riggs and D Batstone, ‘Balancing Profits and Human Dignity in the Gig Economy’, *The Hill*, 31 December 2019, <https://thehill.com/opinion/finance/476344-balancing-profits-and-human-dignity-in-the-gig-economy>.

⁵¹ New School, ‘The New School Announces the Launch of the Institute for the Cooperative Digital Economy’, Press Release, 21 May 2019, <https://www.newschool.edu/pressroom/pressreleases/2019/ICDElaunch.htm>; see also T Scholz, ‘Platform Cooperativism vs. the Sharing Economy’, *Medium*, 5 December 2014, <https://medium.com/@trebors/platform-cooperativism-vs-the-sharing-economy-2ea737f1b5ad>.

⁵² T Scholz, *Overworked and Underpaid: How workers are disrupting the digital economy*, Polity, Cambridge, 2016.

⁵³ K C Kellogg, M A Valentine and A Christin, ‘Algorithms at Work: The new contested terrain of control’, *Academy of Management Annals*, vol. 14, no. 1, 2020, pp. 366–410, <https://doi.org/10.5465/annals.2018.0174>.

Creating an enabling environment that supports collective action will also require new approaches for a digital economy. Researchers and advocates will need to analyse the relevance of existing frameworks for labour law protection, and in particular the applications of frameworks for organising and bargaining collectively. These frameworks have never adequately covered non-standard work, and with the further fragmentation of work in the platform economy, new protections for these rights will be essential. As Alarcon and Gray note, ‘traditional organizing models of collective disruption through strikes and work slowdowns will have to be rethought. The platform economy generates a labour market of peers and independent workers distributed around the globe.’⁵⁴ This means there is no single professional identity, no physical space, and no single regulatory framework to serve as an organising principle.

Platforms themselves have in some cases sought to replicate and create a virtual water cooler for gig workers, but with limited success. Mawii and Aneja of Tandem found that although SweepSouth management created a WhatsApp group for workers, most reported that they were inactive in the group. They felt that the presence of a manager in each group prevented them from freely speaking to each other. However, on their own, workers do use WhatsApp to connect with one another.⁵⁵ Domestic workers and Uber drivers I interviewed had set up their own groups to communicate, share information, and on occasion, organise solidarity actions. This organic, spontaneous organising needs better legal and institutional protection.

Conclusion

Under surveillance capitalism, workers are faced with new forms of coercion and control. As these jobseekers look for information about possible jobs, and particularly in light of the current economic crisis and the major dislocations it has caused in labour markets worldwide, it is likely that work itself will be further fragmented and an increasing number of platforms will emerge to replace traditional labour brokers. More and better research is needed to understand how digital platforms affect workers’ rights and agency. Yet given what we already know, it is also important to act now on several fronts. We must address the problem of worker data ownership and control and promote more democratic forms of data governance. We need to reconceptualise the employment relationship and create new ways to classify non-standard workers to ensure platform companies can be held accountable for worker exploitation. Finally, we need to consider further investment in interventions that directly enhance workers’ ability to connect with one another and act collectively.

⁵⁴ Alarcon and Gray, p. 21.

⁵⁵ Interview, Cape Town, November 2018.

To date, well-intended donors have failed to understand the human rights implications of their investments in platforms for labour markets, which may have expanded the means for coercing and controlling workers. As in the traditional economy, those workers who are in precarious or exploitative conditions, such as migrants and highly isolated workers, are also most vulnerable to digital exploitation. Putting workers at the centre of design of such interventions, as subjects rather than objects, is critical. As gig workers begin to organise, it should become more possible to find credible worker representatives to inform or even participate in governance of new initiatives, as is happening in the platform cooperative space. Correcting the practices of the market leaders, however, and ensuring they do not usurp space for promising alternatives will require a substantial change in regulatory environments around the world. While the European Union has taken the first steps toward better regulation of the gig economy, the governance challenge remains immense.

More work is needed to determine what advocates, donors, policymakers, and other stakeholders might do to support organising and collective action for this growing segment of the global workforce. In the surveillance economy, protecting workers requires redefining rights at work, to take into account new critical questions of accountability and autonomy. The platform economy is recommodifying labour. We need to democratise it.

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